AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Cancelled)

2. (Currently Amended) A method of modulating a digital signal of width L in frequency on a given useful frequency band comprising:

separating the digital signal into N blocks b_n ($1 \leq n \leq N$),

splitting the given useful frequency band into N contiguous parts P_n,

defining channels C_n, of width l_n in frequency such that their sum is equal to L, $\sum_{n=1}^{N} l_n = L$ lying within an associated part P_n, the channels C_n being separated, and

distributing each block of digital signals b_n over the associated channel C_n,

wherein the channels C_n are defined by taking account of a predetermined minimum distance between the channels to allow a predetermined maximum number of blocks to be affected by the phenomenon of flat fading,

wherein the predetermined minimum distance between the channels is determined as a function of the number N of channels, of their width l_n, and of a mean width of the frequency band affected by the phenomenon of flat fading so that the loss of information is not abrupt.

3. (Cancelled)

4. (Previously Presented) The method of modulation as claimed in the claim 2, wherein the minimum distance is determined such that a minority of channels C_n are affected by the phenomenon of flat fading.

5. (Previously Presented) The method of modulation as claimed in the claim 2, wherein the channels C_n are of identical widths equal to an Nth of the width of the digital signal L: $l_n = L/N$, $\forall\ 1 \leq n \leq N$.

6. (Previously Presented) The method of digital modulation as claimed in the claim 2 wherein:

the digital signal is separated into N = 2 blocks b_n,

the given useful frequency band is split into N = 2 parts P_n,

the first block b_1 is distributed over a channel C_1 of width L/2 lying within the first part P_1 of the given useful frequency band and the second block b_1 is distributed over a channel C_2 of width L/2 lying within the second part P_2 of the given useful frequency band.

7. (Previously Presented) The method of modulation as claimed in the claim 2, wherein the given useful frequency band is the FM band.

8. (Currently amended) A modulator of digital signals over a given useful frequency band implementing a method of modulation comprising:

means for separating the digital signal into N blocks b_n ($1 \leq n \leq N$),

means for splitting the given useful frequency band into N contiguous parts P_n,

means for defining channels C_n of width l_n in frequency, lying within the associated part P_n,

means for distributing each block of digital signals b_n over the associated channel C_n,

wherein the channels C_n are defined by taking account of a predetermined minimum distance between the channels to allow a predetermined maximum number of

blocks to be affected by the phenomenon of flat fading,

wherein the predetermined minimum distance between the channels is determined as a function of the number N of channels, of their width l_n, and of a mean width of the frequency band affected by the phenomenon of flat fading so that the loss of information is not abrupt.

9. (Currently Amended) A demodulator of digital signals conveyed on a given useful frequency band by a transmitter comprising a modulator of the digital signals over the given useful frequency band implementing a method of modulation, comprising:

means of scanning of the N channels C_n enabling reading of the N blocks b_n of signals distributed over these channels,

means of recombination of the N blocks read $\hat{b}_n$ in the N channels C_n into a digital signal $\hat{s}[m]$,

wherein said modulator comprises:

means for separating the digital signal into N blocks b_n ($1 \leq n \leq N$),

means for splitting the given useful frequency band into N contiguous parts P_n,

means for defining channels C_n of width l_n in frequency, lying within the associated part P_n,

means for distributing each block of digital signals b_n over the associated channel C_n

wherein the channels C_n are defined by taking account of a predetermined minimum distance between the channels to allow a predetermined maximum number of blocks to be affected by the phenomenon of flat fading,

wherein the predetermined minimum distance between the channels is determined as a function of the number N of channels, of their width l_n, and of a mean width of the frequency band affected by the phenomenon of flat fading so that the loss of information is not abrupt.

10. (Currently Amended) A transmitter of digital signals on a given useful frequency band comprising at least one transmission chain comprising a modulator of the digital signals over the given useful frequency band implementing a method of modulation, wherein the transmission chain comprises an error corrector coder conveying the coded digital signal $c^q[m]$ to the modulator, and

said modulator comprises:

means for separating the digital signal into N blocks b_n ($1 \leq n \leq N$),

means for splitting the given useful frequency band into N contiguous parts P_n,

means for defining channels C_n of width l_n in frequency, lying within the associated part P_n,

means for distributing each block of digital signals b_n over the associated channel C_n

wherein the channels C_n are defined by taking account of a predetermined minimum distance between the channels to allow a predetermined maximum number of blocks to be affected by the phenomenon of flat fading,

wherein the predetermined minimum distance between the channels is determined as a function of the number N of channels, of their width l_n, and of a mean width of the frequency band affected by the phenomenon of flat fading so that the loss of information is not abrupt.

11. (Previously Presented) The transmitter as claimed in the claim 10, wherein the transmission chain comprises an interleaver placed between the error corrector coder and the modulator.

12. (Previously Presented) The transmitter as claimed in the claim 10, wherein a distinct set of channels $\{C^q_n\}$ is associated with each of the Q transmission chains.

13. (Currently Amended) A receiver of digital signals conveyed on a given useful frequency band by a transmitter comprising a demodulator,

wherein said transmitter of the digital signals on the given useful frequency band comprising at least one transmission chain comprising a modulator of the digital signals over the given useful frequency band implementing a method of modulation,

wherein the transmission chain comprises an error corrector coder conveying the coded digital signal $c^q[m]$ to the modulator, and

said modulator comprises:

means for separating the digital signal into N blocks b_n ($1 \leq n \leq N$),

means for splitting the given useful frequency band into N contiguous parts P_n,

means for defining channels C_n of width l_n in frequency, lying within the associated part P_n,

means for distributing each block of digital signals b_n over the associated channel C_n

wherein the channels C_n are defined by taking account of a predetermined minimum distance between the channels to allow a predetermined maximum number of blocks to be affected by the phenomenon of flat fading,

wherein the predetermined minimum distance between the channels is determined as a function of the number N of channels, of their width l_n, and of a mean width of the frequency band affected by the phenomenon of flat fading so that the loss of information is not abrupt,

wherein said demodulator of digital signals conveyed on the given useful frequency band by the transmitter comprising the modulator of the digital signals over the given useful frequency band implementing the method of modulation, comprising:

means of scanning of the N channels C_n enabling reading of the N blocks b_n of signals distributed over these channels,

means of recombination of the N blocks read $\hat{b}_n$ in the N channels

C_n into a digital signal $\hat{s}[m]$,

wherein a decoder associated with the error corrector coder of the transmitter receiving the digital signal recombined $\hat{s}[m]$ by the demodulator,

wherein the given useful frequency band is the FM band.

14. (Currently Amended) A receiver of digital signals conveyed on a given useful frequency band by a transmitter comprising a demodulator,

wherein said transmitter of digital signals on a given useful frequency band comprising at least one transmission chain comprising a modulator of the digital signals over the given useful frequency band implementing a method of modulation,

wherein the transmission chain comprises an error corrector coder conveying the coded digital signal $c^q[m]$ to the modulator, and

said modulator comprises:

means for separating the digital signal into N blocks b_n ($1 \leq n \leq N$),

means for splitting the given useful frequency band into N contiguous parts P_n,

means for defining channels C_n of width I_n in frequency, lying within the associated part P_n,

means for distributing each block of digital signals b_n over the associated channel C_n

wherein the channels C_n are defined by taking account of a predetermined minimum distance between the channels to allow a predetermined maximum number of blocks to be affected by the phenomenon of flat fading,

wherein the predetermined minimum distance between the channels is determined as a function of the number N of channels, of their width I_n, and of a mean width of the frequency band affected by the phenomenon of flat fading so that the loss of information is not abrupt,

wherein the transmission chain further comprises an interleaver placed between the error corrector coder and the modulator,

wherein said demodulator of digital signals conveyed on the given useful frequency band by the transmitter comprising the modulator of the digital signals over the given useful frequency band implementing the method of modulation, comprises:

means of scanning of the N channels C_n enabling reading of the N blocks b_n of signals distributed over these channels,

means of recombination of the N blocks read $\hat{b}_n$ in the N channels C_n into a digital signal $\hat{s}[m]$,

wherein

a deinterleaver associated with the interleaver of the transmitter receiving the digital signal recombined $\hat{s}[m]$ by the demodulator,

a decoder associated with the error corrector coder of the transmitter receiving the digital signal recombined deinterleaved $\hat{c}[m]$ by the deinterleaver,

wherein the given useful frequency band is the FM band.

15. (Previously Presented) Use of the transmitter as claimed in claim 10 conveying digital signals in the FM band.

16. (Cancelled)

17. (Cancelled)

18. (Cancelled)